

Claims

What is Claimed is:

1. A wireless communications network for communicating at least one data payload, comprising:

a wired network;

a wireless channel;

a server computer connected to the wired network;

a wireless packetized data communications provider equipment connected to the wired network;

a client device communicatively connected via the wireless channel to the wireless packetized data communications provider; and

wherein the server computer assigns a global sequence number to each payload.

2. The wireless communications network of claim 1, further comprising a detector for determining whether any payload has not been received by the client device by means of the global sequence number.

3. The wireless communications network of claim 2, wherein the detector is selected from the group consisting of: a software and a hardware of the client device.

4. The wireless communications network of claim 3, wherein the first client device communicates to the server computer an identifier of any payload that is not received by the client device, based on the global sequence number.

5. The wireless communications network of claim 2, wherein the wired network is the Internet.

6. The wireless communications network of claim 1, wherein the wireless channel is a cellular packetized data system.

7. The wireless communications network of claim 1, wherein the wireless channel is a CDPD system.

8. The wireless communications network of claim 1, further comprising a compressor for compressing together headers of each payload.

9. The wireless communications network of claim 8, wherein the compressor is the server computer.

10. The wireless communications network of claim 1, further comprising a comparator for determining whether a time differential between receipts by the client device of every other sequential payload exceeds a time constant indicative of an effective data receipt rate of the client device.

11. The wireless communications network of claim 10, wherein the comparator is selected from a group consisting of: a software and a hardware at the client device.

12. The wireless communications network of claim 10, wherein the client device assumes any payload loss occurs on the wire side if the time differential does not exceed a multiple of an effective data transmit rate of the server computer and otherwise on the wired side.

13. The wireless communications network of claim 1, further comprising:
a compressor for compressing together all data headers of payloads of information at the server computer.

14. The wireless communications network of claim 13, further comprising:
a transmitter at the server computer for transmitting the compressed data headers of payloads.

15. The wireless communications network of claim 1, further comprising:
a bundling rate determiner at the client device, wherein an outstanding number of bytes not yet received by the client device is divided by an effective data receipt rate of the client device, and the server computer adjusts a send rate of the server computer based on a multiple of the result of the division.

16. A method of wireless communications, comprising the step of:
assigning each payload a global sequence number.
17. The method of claim 16, further comprising:
receiving each of next successive payloads;
determining a time differential between receipts of the next successive
payloads;
comparing the time differential to a multiple of a server transmit rate;
wherein if the time differential exceeds the multiple then payload loss is
assumed occurring on a wireless portion of a network and otherwise on a wired
portion of the network.
18. A method of wireless communications, comprising the step of:
compressing together all headers of each payload of information at the
server computer.
19. The method of claim 18, further comprising the step of:
transmitting together all headers as so compressed.
20. A method of wireless communications, comprising the steps of:
determining at a client device the number of bytes outstanding not yet
received;

dividing the number of bytes by an effective receipt data rate of the client device; and

varying a send rate of a server computer according to a multiple of the result of the step of dividing.